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# (12) United States Patent

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#### (54) HUMIDITY MEASUREMENT DEVICE

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See application file for complete search history.

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# (57) ABSTRACT

A highly sensitive humidity measurement device is provided. The humidity measurement device has: a housing component integrally including a connector for performing input/output to/from the outside and a connector terminal component; an electronic circuit board mounted on the housing component and electrically connected to the connector terminal; and a humidity sensing element provided on the electronic circuit board. When the humidity measurement device is installed in an installation hole that is provided in a part of a main air flow passage through which suction air flows, apart of the housing component is exposed to the suction air flowing through the main air flow passage. The housing component is provided with a bypass passage to suction a part of the suction air. The bypass passage includes a bypass inlet opening that serves as a suction port of the suction air and a bypass outlet opening that discharges the suction air. The bypass outlet opening is exposed to the suction air.

## 12 Claims, 7 Drawing Sheets

